



Evaluation of the Anchorage Coordinated Agency Network (CANS) Program

Report presented to the Anchorage Police Department
and the Alaska Division of Juvenile Justice

by

Matthew Giblin

Justice Center
University of Alaska Anchorage



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INTRODUCTION

In Spring 1999, the Anchorage Police Department and the Alaska Division of Juvenile Justice forged a unique partnership designed to enhance the supervision and services provided to juvenile probationers in Anchorage. Modeled after a successful program in San Diego County, California, the Anchorage Coordinated Agency Network (CANS) project extended the supervision arm of the youth probation office by having Anchorage police officers make random visits to juvenile probationers. The Justice Center at the University of Alaska Anchorage joined the Anchorage Police Department (APD) and the Alaska Division of Juvenile Justice (DJJ) to assess the CANS program and produce a report documenting the evaluation findings. This collaboration joins the practitioner competencies of the Anchorage Police Department and the Division of Juvenile Justice with the research and evaluation skills of the Justice Center in order to focus on a promising project designed to increase levels of supervision for juveniles on probation.

The evaluation examines the CANS program during its pilot phase, June 1999 through December 1999. This research assesses, first, whether juveniles participating in the CANS program differed from a control group of non-CANS participants with respect to two outcomes: new probation violations and new offenses. Second, an effort is made to determine the most important factors predicting program outcomes.

PROGRAM OVERVIEW

The Anchorage Coordinated Agency Network program (CANS) is modeled after a collaborative project between the San Diego Police Department and the San Diego County Probation Department. Although the Anchorage program has borrowed many of the key elements from the San Diego program, the two do differ in the types of juveniles eligible for participation. This section briefly outlines several key elements of the CANS program.

The Anchorage program targets juvenile probationers in the Anchorage Police Department service area with the hope of fulfilling two objectives. First, the program is designed to enhance overall levels of probationer supervision through “intensive and systematic supervision” (O’Rourke, et al., 1998). The police officers involved in the program volunteer to participate in CANS, and each participating officer is assigned at least one or, in some cases, two youth probationers. In addition to their regular police duties, the police officer is expected to make at least two unannounced contacts with his/her probationer each month to ensure that the juvenile is in compliance with the terms of his/her probation. Assessing compliance is most often accomplished by questioning the juvenile, his/her parents and/or guardian, answering any questions posed by the juvenile, and/or providing advice as needed. After each visit, the officer writes a brief description of the nature of

his/her contact with the juvenile or other individual and forwards the information to the CANS program coordinator within the Anchorage Police Department.

Several examples of these write-ups are presented below:

6/25/99— J. missed meeting with P.O. Myself and P.O. responded and spoke with J. at home. J. said Mom forgot to remind him about the meeting. J. said he and S. got into an argument on Monday (6/21) and he put a hole in his wall with his head in anger. J. also did not show up for work on Monday and was fired. J. admonished to have no contact with S. as ordered by court documents. I spoke with S.'s Mom by phone who said that S. told her Monday J. had "head butted" her on Monday or Tuesday but she had no visible injury . . . Not in Compliance.

7/20/99— Stopped by at about 2030 and was told S. would be home by 2200 and he was. Dad says S. is being compliant with rules . . . In compliance.

7/31/99— I went to F.'s residence to contact him for the second time this month. F. was not home but I talked with his father who told me that F. has been doing well. F. has been going to his drug test regularly and working full-time. Still pursuing GED for Fall. . . . In Compliance.

8/23/99— F. wasn't home, talked with guardian, S., who said he had been doing very well other than being arrested for trespassing at the Dimond Center. S. also stated that F. was working at [Pizza Restaurant]. Note, third time I've been to the address and have yet to see F. . . In compliance.

9/1/99—K. ran away last night per Mom. Warrant pending at McLaughlin Youth Center. . . Not in Compliance.

9/17/99— Contacted new renters of residence who stated they did not know W. and he did not live there. They didn't know where he lived. . . . Not in compliance.

9/21/99—D. still living in trailer in backyard. Was sleeping. Said he worked late at [establishment] and didn't go to school today or yesterday. Said he was catching up on school credits and was saving money to pay his restitution. Expected to have it in a couple weeks. Said he would have list of goals on next visit written down.

The one-to-one police officer/probationer contact augments the supervision already provided by juvenile probation officers, each of whom is currently handling a caseload of 40-50 probationers and spending a good deal of time with more serious offenders. Under regular probation, the level of supervision in less serious cases need only involve contacting probationers once a month and having in-person contacts once every three months. The CANS program, then, supplements this supervision by increasing the number of monthly in-person contacts by combining the monitoring capacities of both probation and the police. In fact, a juvenile in the CANS program can receive up to three times as many contacts as they would have received under regular probation. If a juvenile is not in compliance, the police department will notify the probation officer responsible for the juvenile, who is then able act upon any violations noted by the police officer.

A second objective of the CANS program is to provide positive role models for youth. As one CANS participant noted, "I always thought that the police were kind of jerks, and I met this guy [police officer] and I didn't think that at all . . . I thought he was cool . . . It made me feel like he was my friend or something" (Aho, 1999: B1). Through their contact with juveniles, officers can engender

mutual respect and foster positive interactions between youth and the police. Consider the following summary of a CANS contact:

7/17/99— I met with J. and his foster parents at their new residence. We discussed his past, his current treatments, his probation conditions, problems he is having with one of his conditions, my background, and what my role will be during his probation. We agreed to have two or three meetings a month, on Saturdays, to discuss his progress and problems. I told him I would be in contact with his foster parents, teachers, and counselors to check up on him. I gave him a way to contact me to discuss any problems he is having or anything I could help him with. I felt it was a very good meeting and J. seemed to accept me and my role with him. He told me the only problem he was having with his probation was his treatment, however, his foster parents said he was making progress. He is nervous but excited to be going to [local school] this year. Only two people know him there . . . it is a new start. In private, J. told me he likes his foster parents, but sometimes has problems with their rules. When he gets upset he goes to his room until he calms down, then talks it out with them. He doesn't have any problems with the other two foster kids in the home. We finished our meeting by J. showing me his room, and we discussed some things in private. The foster parents were given a way to contact me with any concerns. . . . In compliance.

These objectives are similar for both the Anchorage and San Diego programs. Despite the similarities, however, the Anchorage program is distinct from its predecessor in one important way. While the San Diego program focuses on less serious unsupervised caseloads or juveniles requiring only mail or phone supervision, the Anchorage program has been applied to already-supervised cases. The program intensifies the supervision juveniles currently receive from probation officers by supplementing these efforts with additional police officer supervision. Rather than widening the net and increasing the scope of juveniles under some form of supervision, the CANS program increases supervision levels of juveniles already on probation.

Program officials anticipate that, if the objectives described above are met, juvenile probationers participating in the CANS program will have lower levels of recidivism than those juveniles who do not participate. The pilot phase provided researchers and CANS officials an opportunity to evaluate the outcomes of a select group of juvenile probationers before the program was fully implemented on a larger scale.

RELATED LITERATURE

Program evaluations of CANS or similar programs are virtually non-existent. The lone exception is a six-month evaluation of the San Diego program that acted as the model for the Anchorage CANS program. In the evaluation, the authors note that CANS juveniles were less likely to recidivate than their control group counterparts (see O'Rourke et al., 1998). More specifically, only 6 percent of juveniles in the collaborative program recidivated compared with 22 percent of control group juveniles. Beyond this single evaluation, no directly relevant research exists on the CANS program. Despite this lack of research, it is possible to predict the possible outcomes of CANS juveniles by examining the research literature on another supervision program—intensive supervision probation (ISP).

Among other things, intensive probation is designed to increase the level of supervision that probationers receive. In many cases, enhanced supervision is coupled with electronic monitors, house arrest, or other restrictions that further increase overall monitoring levels (Morris & Tonry, 1990). The similarities between ISP and the CANS program are clear. Probation officers, assigned heavy caseloads and focused on more serious offenders, often do not have the resources necessary to provide extensive supervision to all probationers. Both ISP and CANS are designed to increase the levels of supervision received by probationers although they do so by different methods. ISP typically reduces the caseloads of probation officers to the point where the officer-probationer ratio permits increased supervision. In addition, the use of additional restrictions noted above helps in increasing overall supervision and monitoring levels. CANS, in contrast, does not reduce the caseloads of probation officer. Instead, it increases supervision by adding additional “supervisors.” That is, rather than reducing a probation officer’s caseload from, say, one officer per 100 probationers to one officer per 25 probationers, the CANS program makes the ratio more favorable by adding individuals (police officers) capable of providing additional supervision. In other words, the CANS program works by having Anchorage police officers supplement the supervision work already being performed by Division of Juvenile Justice probation officers.

Given the similarities between the two types of programs, it is instructive to look at ISP evaluations. Tonry (1998) notes that ISP studies overwhelmingly suggest that intensive supervision results in “net widening, high revocation rates, and related case-processing costs” (p. 691). Another review of the ISP literature also reports that most studies demonstrate that increased monitoring increases the likelihood of technical violations (Fulton et al., 1997). One study indicated that, while failure was more likely among ISP participants, non-participants were more likely to fail as a result of the commission of new offenses (Wagner, 1989 as cited in Fulton et al., 1997). In another example, a Colorado ISP program evaluation found that ISP participants were nearly two and a half times more likely to have new technical violations than individuals on regular probation (Bureau of Justice Statistics, 1997). In addition, the researchers found that failures due to the commission of new offenses were less likely for ISP participants compared with individuals on traditional probation.

Taken together, prior study results indicate that, due to more stringent supervision, the CANS program might result in increases in technical violations. Such a finding would actually lend support to the idea that the program is enhancing supervision where supervision was lacking and increasing accountability in ways that were not previously possible. In addition, there is some evidence suggesting that the increased supervision may reduce overall levels of new criminal offenses. In order to examine the outcomes of the CANS project, attention is now directed toward the evaluation portion of the project.

METHODOLOGY

The Justice Center conducted a two-part examination of the CANS project. The first part of the study explored whether the CANS program participants had more favorable outcomes than a non-program control group. Second, an analysis was conducted to determine the relevant predictors

of successful program outcomes.

Sample and Data

The experimental portion of the evaluation was facilitated by the random assignment of probationers employed during the pilot phase of the study. Random assignment for the present evaluation was conducted prior to the commencement of the CANS program. The Division of Juvenile Justice Youth Probation Department produced a list of active youth probationers who were not institutionalized at the time. The DJJ list included 260 juveniles currently residing in Anchorage and currently on probation. From this list, 95 juveniles were randomly assigned to be participants in the CANS program pilot phase and 95 were assigned to a control group. The juveniles participating in the CANS program will be referred to as CANS participants or the experimental group throughout this report. The purpose of the control group is to provide a comparison for CANS participants and aid in assessing the impact of the CANS program. Unlike the CANS participants, juveniles in this group did not receive additional supervision and were supervised by DJJ youth probation officers only.

With random assignment, each juvenile has an equal chance of being assigned to the CANS program. The benefits of random assignment have been noted by Rossi, Freeman, and Lipsey (1999):

Because the resulting experimental and control groups differ from one another only by chance, whatever influences may be competing with an intervention to produce outcomes are present in both groups to the same extent, except for chance fluctuations . . . Any given difference in outcome among randomized experimental and control groups, therefore, can be compared to what is expected on the basis of chance (p. 283).

In other words, since the groups are presumed to be equal, any differences that exist can be attributed to the intervention, with varying degrees of confidence.

The next step in the evaluation was securing the necessary data. In order to conduct the evaluation, the Anchorage Police Department and DJJ provided data on each of the 190 juveniles (95 treatment and 95 control) participating in the experimental study. APD produced data on the officer/probationer dyad (e.g., same sex, opposite sex, same race, different race) and the frequency of contacts. This information is used to examine the possibility that same sex, race, and similar age pairings contribute to the overall success of the probationer in the CANS program. In addition, the data allow for an assessment of whether more frequent visits are more productive; that is, does the frequency of contact affect the success of the juvenile on probation? DJJ provided information on each probationer including demographic characteristics such as age, sex, race, and education, as well as data on prior experiences such as prior record and history of child abuse. This information is included in the analysis to control for the effects of demographic and history variables as well as to isolate the factors that are most likely to predict program outcomes.

In order to be eligible for inclusion in the study, both control and experimental group members must have been on probation and not detained or institutionalized at the CANS program, June 1,

1999. Thirty-five juveniles were removed from the analysis due to their ineligibility. The majority of ineligible cases were excluded because they were either off probation or institutionalized before the pilot period began. Three additional juveniles were excluded for being AWOL at the time of the program start and an additional juvenile was excluded due to his

move to Washington. Table 1 reveals that the majority of ineligible juveniles were drawn from the control (non-CANS) group (88.6%); being off probation was the primary reason for ineligibility (51%).

The final sample used in the analysis consisted of 155 juveniles (91 experimental, 64 control). Table 2 presents descriptive statistics for juveniles in both groups. A chi-square test statistic was computed in order to examine the differences between control and experimental group members. The chi-square statistic assesses differences in observed and expected frequencies where the expected frequency distribution for both groups is hypothesized to be equal. For example, if the expected frequency distribution for the two groups is expected to be equal, the proportion of females in each group and the proportion of juveniles with prior records should be similar for each group. The larger the difference between the observed and the expected frequencies, the more likely that the differences will be significant.¹ Chi-square tests reveal that the two groups have similar frequency distributions for each of the variables analyzed. That is, there do not appear to be any significant differences between the control and CANS groups on the variables included in the study. Such a finding is expected given the random assignment of juveniles to control and experimental groups. As stated earlier, the benefit of random assignment is based on the presumption that the assignment produces groups that are equal in all respects. This analysis reveals that the disproportionate attrition of juveniles from the control group did not create differences between the two groups on any of the variables examined.

Variables

To examine the impact of the CANS program, several different analyses are conducted using two different outcome (dependent) variables. The first dependent variable is new probation violations (ANY_PROB). This variable identified whether a particular juvenile was referred with any new probation violation during the pilot period (June 1, 1999-December 31, 1999). The variable was dichotomous and coded yes (new violations) or no (no new violations). New probation violations

Table 1. Reasons for Excluding Cases from Analyses

Reason for exclusion	Control		Experimental	
	N	%	N	%
Off probation	18	58 %	0	0 %
Institutionalized	11	35	2	50
AWOL	1	3.2	2	50
Other	1	3.2	0	0

Percentages may not total 100 percent due to rounding.

¹ Significance levels and *p* values will be noted throughout this report. These concepts refer to the likelihood that any differences observed were produced by chance. For example, if $p < .05$, there is a 5 percent chance that the differences are not due to the effects of the program but, rather, are due to chance or random error. As the significance level decreases, the likelihood that the differences are due to chance also decreases.

Table 2. Characteristics of Control and Experimental Groups

Variable	Control		Experimental		Chi-square
	N	%	N	%	
Age at program start					8.421
11	0	0.0 %	1	1.1 %	
12	0	0.0	0	0.0	
13	3	4.7	3	3.3	
14	2	3.1	3	3.3	
15	5	7.8	18	19.8	
16	19	29.7	15	16.5	
17	13	20.3	21	23.1	
18	18	28.1	24	26.4	
19	4	6.3	5	5.5	
20	0	0.0	1	1.1	
Race/ethnicity					10.086
White	25	39.1 %	48	52.7 %	
Black	7	10.9	16	17.6	
Hispanic	3	4.7	2	2.2	
Asian	4	6.3	2	2.2	
Alaska Native/Native American	10	15.6	12	13.2	
Other	1	1.6	0	0.0	
Multi-racial/ethnic	14	21.9	10	11.0	
Unknown	0	0.0	1	1.1	
Sex					0.177
Male	57	89.1 %	79	86.8	
Female	7	10.9	12	13.2	
Education (last grade completed)					8.376
6	1	1.6 %	2	2.2 %	
7	1	1.6	6	6.6	
8	15	23.4	17	18.7	
9	6	9.4	15	16.5	
10	19	29.7	19	20.9	
11	9	14.1	17	18.7	
12/GED	8	12.5	13	14.3	
Unknown	5	7.8	2	2.2	
Prior misdemeanor adjudications					1.838
None	9	14.1 %	12	13.2 %	
1-5	49	76.6	69	75.8	
6-10	5	7.8	10	11.0	
Unknown	1	1.6	0	0.0	
Prior felony adjudications					3.180
None	46	71.9 %	71	78.0 %	
1-5	16	25.0	20	22.0	
6-10	1	1.6	0	0.0	
Unknown	1	1.6	0	0.0	
Prior history of substantiated abuse/neglect					0.493
Yes	29	45.3 %	39	42.9 %	
No	34	53.1	49	53.8	
Unknown	1	1.6	3	3.3	
Changes in living situation					0.423
0	21	32.8 %	28	30.8 %	
1-2	20	31.3	33	36.3	
3 or more	23	35.9	30	33.0	

Percentages may not total 100 percent due to rounding

may result from failing to obey one or more of the following conditions imposed on probationers:

I will obey all municipal, State, and Federal laws

I will remain in the placement designated by my probation/intake officer and obey the curfew hours set by my parents, guardian, custodian, or probation/intake officer

I will notify my Probation/Intake Officer prior to changing my residence, employment, or school

I will obey the rules and instructions set forth by my parents, guardian, custodian, and Probation/Intake Officer

I will attend school or vocational training when in session and conduct myself in accordance with school policy; otherwise, I will maintain steady employment

I will report as directed to my Probation/Intake officer

I will appear at all scheduled court hearings

I will not ingest illegal drugs or alcohol, and will submit to random urinalysis as requested

I will not possess, have in my custody, handle, purchase, or transport any firearm, knife, club, or other type of weapon, ammunition, or explosives. I will not carry any weapon on my person including pocket knives.

I will obey the following additional conditions

The second dependent variable is new charges (ANY_OFF). Again, the variable is dichotomous—coded yes or no. This variable measures whether the juvenile committed any new criminal offenses which resulted in new charges being filed. This did not include probation violations. Like the ANY_PROB variable, this variable covered the offenses that occurred during the CANS pilot phase.

Since the purpose of the study was to examine the impact of CANS program participation on the outcomes variables discussed above, the most important independent variable included in the analysis is group membership (CON_EXP). That is, the primary interest is determining whether experimental group members (CANS participants) have more favorable outcomes than control group members. The CON_EXP variable is dichotomous and indicates whether the juvenile was a member of the CANS group or the control group.

Several additional variables were included in the equation as control variables. As shown in Table 3, these variables include race, sex, and age of the juvenile, prior felony and misdemeanor adjudication record, educational record, and prior history of child abuse. Also included in the analysis were changes in living situation. This variable measured a juvenile's change in guardianship over the life course. For example, a juvenile who moved from biological parents to foster parents to grandparents would have had 2 changes. This variable was dummy coded into two variables—1-2 changes (1=yes, 0=no) and 3 or more changes (1=yes, 2=no). A variable of zero

changes was not included in the analysis and acts as a reference/contrast variable. An indicator of employment was also included in the analysis, to learn whether the juvenile was working during the study period and, if so, the percent of time employed. The variable was dichotomous, coded as either working 50 percent or more during the period or not working/working less than 50 percent of the time. A similar variable was constructed for school attendance.

Finally, information specifically related to the CANS program was included in the evaluation. The first three variables were related to the characteristics of the officer-juvenile match—dyad-race, dyad-sex, dyad-age. These variables measured the similarities between the juvenile and the probation officer assigned. First, the age difference between the juvenile and the officer was computed and included in the analysis as a continuous variable. Second, a dichotomous variable was constructed that represented whether both the juvenile and officer were the same sex (1=yes, 0=no). Third, a similar variable was constructed to indicate whether the pair was the same race (1=yes, 2=no). By including these variables in the analysis, it was possible to assess whether particular CANS officer-juvenile matches were influential in predicting outcomes. A fourth CANS program variable, measuring the number of visits/intensity of contacts, was included in the analysis. This variable is simply an indicator of the number of contacts the CANS officer made with the juvenile or persons knowledgeable about the juvenile. The inclusion of this variable allowed for an examination of relationship between contacts and outcomes.

The following discussion presents descriptive findings from the pilot phase of the CANS program. In addition, the impact of CANS is assessed in several ways. First, a simple cross-tabulation and chi-square test have been used to determine whether differences exist between the control and experimental groups in the distribution of new charges and new probation violations. Second, more sophisticated analyses employ logistic regression techniques to determine the most important predictors of the two variables above—new offenses and new technical violations. As a

Table 3. Description of Variables Included in Analysis

Variables		Description
Control/experimental		Is the juvenile in the CANS program? (1 = yes, 0 = no)
Race		
	Black	Juvenile's race (1 = black, 0 = non-black)
	Hispanic	Juvenile's race (1 = Hispanic, 0 = non-Hispanic)
	Asian	Juvenile's race (1 = Asian, 0 = non-Asian)
	Alaska Native/Native American	Juvenile's race (1 = Native, 0 = non-Native)
	Other	Juvenile's race (1 = other, 0 = non-other)
	Multi-ethnic	Juvenile's race (1 = multi-ethnic, 0 = non-multi-ethnic)
Sex		1 = male, 0 = female
Juvenile age		Age as of June 1, 1999
Prior history of abuse/neglect		Substantiated abuse (1 = yes, 0 = no)
Education		Last grade level completed (grade #)
Prior misdemeanor adjudications		Number of prior misdemeanor adjudications (#)
Prior felony adjudications		Number of prior felony adjudications (#)
Changes in living situations		Stability in living situation (1 = 1 + changes, 0 = none)
Work time		Working during period (1 = greater than 50%, 0 = less than 50%)
School time		Attending school during period (1 = greater than 50%, 0 = less than 50%)
Dyad – age		Officer's age minus juvenile's age
Dyad – race		Same race? (1 = same race, 0 = different race)
Dyad – sex		Same sex? (1 = same sex, 0 = different sex)
Number of visits		Number of contacts made w/ juvenile (#)

statistical technique, logistic regression analysis helps identify the predictors that influence the probability of the outcome being new offenses or new probation violations. Logistic regression builds on the chi-square analysis by including additional variables in the prediction equation. In other words, this type of analysis allows for an examination of the predictors of success while controlling for other factors that may moderate the impact of the CANS program.

The use of a continuous dependent variables such as the number of new offenses and the number of new probation violations was avoided due to the lack of variation in the number of juveniles with multiple incidents. Therefore, the analysis was limited to the use of the dichotomous variables described above.

ANALYSIS

CANS Officers

As noted above, CANS program officers participated in the program voluntarily with each participating police officer assigned one or two juveniles. Each officer was supposed to visit the juvenile two times per month. Ninety-two officers participated in the CANS program during the pilot phase. As shown in Table 4, the majority of the officers were between the ages of 30 and 39 (53.3%), male (87.0%), and white (85.9%).

Contacts

CANS officers made a total of 186 contacts with the CANS participants between June 1, 1999 and December 31, 1999. Figure 1 depicts the monthly number of visits. Clearly, the majority of visits occurred in August and September. Ninety-six contacts were made during these two months while 90 contacts were made in the other four months combined. Most visits were made during September (50), followed by August (46), July (32), October (32), June (15), November (10), and December (1). It is not surprising that the pattern of contacts takes on a bell-shaped curve. In June, the pilot phase was just beginning and officers were becoming acquainted with their role. As they learned about the expectations of the program, they gradually increased the number of contacts they were making. At the end of the pilot phase, the number of visits tapered off. This reduction can likely be attributed to several factors. Some juveniles were charged with new offenses or violated conditions of their probation and were institutionalized. Other juveniles simply completed their probation and were no longer a

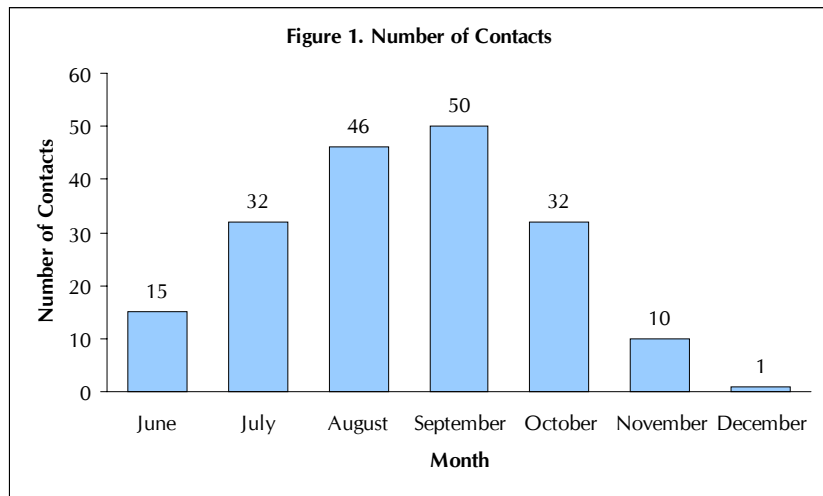
Table 4. Characteristics of CANS Program Officers

Variable	N	%
Age		
20-29	28	30.4 %
30-39	49	53.3
40-49	10	10.9
50-59	5	5.4
Sex		
Male	80	87.0 %
Female	12	13.0
Race/ethnicity		
White	79	85.9 %
Black	4	4.3
Asian	3	3.3
Alaska Native/Native American	1	1.1
Hispanic	5	5.4
Percentages may not total 100 percent due to rounding.		

part of the program. In either case, there were fewer juveniles to supervise and contact at the latter stages of the pilot phase than at the beginning.

The number of contacts received by each CANS program juvenile varies. Table 5 shows that the majority of juveniles received between one and three visits during the pilot phase

(56.1%). Twenty juveniles, or 22 percent of CANS participants, did not receive any visits during the period. Most juveniles received one visit (30.8%) between June and December while 14.3 percent received three visits and 11 percent received two visits. Twenty-two percent of juveniles were contacted by their CANS officer four times or more. The mean number of contacts was 2.01 contacts over the nine month period.



Outcomes

Having discussed the characteristics of the CANS juveniles and program officers and intensity of contacts during the pilot phase, attention will now turn to an examination of program outcomes. Although the goal of the CANS program is to reduce levels of recidivism, the ISP literature briefly addressed above suggests that individuals subjected to intensified levels of supervision are likely to show more violations, particularly technical violations. Therefore, three different outcomes are equally plausible. CANS program participants may have fewer new offenses and/or violations than non-participants thereby lending support to the crime prevention benefits of the program. Alternatively, the participants may have more new offenses and/or violations due to the fact that they are more intensively monitored than non-participants. A third outcome that was found in some ISP-related research is that increased supervision increases technical violations but decreases the likelihood of new criminal offenses. Table 6 presents simple outcome statistics and chi-square test statistics for both new offenses and new probation violations occurring during the pilot phase.

The results indicate that a slightly smaller proportion of CANS juveniles (19.8%) committed new offenses during the pilot phase when compared with control group participants (23.4%). The difference, however, was small and the chi-square statistic did not achieve statistical significance. The

Table 5. Number of Contacts Received

Number of visits	Juveniles	
	N	%
0 visits	20	22.0 %
1 visit	28	30.8
2 visits	10	11.0
3 visits	13	14.3
4 visits	8	8.8
5 visits	6	6.6
6 visits	5	5.5
7 visits	1	1.1

Percentages may not total 100 percent due to rounding

Table 6. New Probation Violations and Offenses					
	Control		Experimental		
	N	%	N	%	
Any new probation violation?					
Yes	11	17.2 %	27	29.7 %	
No	53	82.8	64	70.3	
	Chi-square	3.164	Significance	0.089	
Any new offense?					
Yes	15	23.4 %	18	19.8 %	
No	49	76.6	73	80.2	
	Chi-square	0.300	Significance	0.691	
Percentages may not total 100 percent due to rounding					

two groups did differ to a greater extent with regards to new probation violations. While 17.2 percent of control group members committed new technical violations during the period, 29.7 percent of CANS juveniles committed new technical violations.² Again, the differences were not significant at the commonly used .05 *p* value but the findings, consistent with findings from the ISP literature, do lend some

support to the idea that increased supervision leads to increased numbers of probation violations.

The data also reveal that the 155 juveniles involved in the evaluation were involved in 43 incidents/events that resulted in new charges being filed. Of these incidents, 26 (60.4%) were committed by individuals in the CANS program while only 17 (39.5%) were committed by juveniles in the control group. The 26 experimental group incidents that resulted in new charges were committed by 18 different CANS program juveniles. Fifteen control group juveniles were responsible for 17 incidents that resulted in new charges. Table 7 presents the most serious charge for each of the 43 events that involved control and experimental group juveniles. It is worth noting that the differences between the control and the CANS group in the number of incidents is small when the size of each group is taken into account. That is, there were .286 incidents for each CANS program juvenile while there were .266 incidents for each control

Table 7. New Offenses Committed by Control and Experimental Group Members					
	Control		Experimental		
	N	% of all incidents	N	% of all incidents	Total
Violent/personal offense					
Assault	2	4.7 %	6	14.0	8
Robbery	0	0.0	1	2.3	1
Sexual assault/rape by force	0	0.0	1	2.3	1
Weapons-related	1	2.3	2	4.7	3
Drug/alcohol-related offenses					
Drug possession	0	0.0 %	2	4.7	2
Property offenses					
Burglary	0	0.0 %	1	2.3	1
Damage/destruction	1	2.3	0	0.0	1
Larceny/theft	5	11.6	8	18.6	13
Vehicle theft	4	9.3	2	4.7	6
Trespassing	0	0.0	1	2.3	1
Miscellaneous offenses					
Flight/escape	1	2.3 %	0	0.0	1
Obstructing/resisting	1	2.3	0	0.0	1
Mischief/disturbance	2	4.7	2	4.7	4
Total	17	39.5 %	26	60.5	43
Percentages may not total 100 percent due to rounding.					

² Note that the two groups may not necessarily differ in the number of new offenses or new probation violations. Differences may be a product of the increased supervision and the increased likelihood of being caught.

group member. This finding of very small differences in the rate of new incidents mirrors the findings above, suggesting no differences between the two groups in the likelihood of facing new charges (the new offense/no new offense dichotomy).

A more sophisticated analysis was needed to determine the predictors of program success. Logistic regression analysis, unlike the above cross-tabulations, takes into account the fact that CANS participation is likely not the only factor that influences outcomes. This statistical procedure can include additional variables thought to contribute to the outcome and identify the relative importance of each factor while considering the effects of others. This is where the control variables (e.g., age, race, prior abuse) discussed above become important for this evaluation. The analysis can consider the impact of CANS participation while holding all of these other variables equal. This type of analysis is a stronger test of the influence of CANS on new charges and new probation violations.

A separate analysis was conducted for each outcome variable (new charges, new violations). The results are presented in Table 8.³ Model 1 presents the logistic regression coefficients and odds ratios for the dependent variable ANY_PROB (new probation violations). Model 2 presents the logistic regression coefficients and odds ratios for the dependent variable ANY_OFF (new charges). Each model will be examined separately.

The first analysis assessed the impact of CANS program participation on the dependent variable ANY_PROB

Variable	Model 1 (ANY PROB)		Model 2 (ANY OFF)	
	Beta	Odds ratio	Beta	Odds ratio
CON_EXP	1.116	3.209 **	-.236	.790
Race				
White		Contrast		Contrast
Black	-.343	.710	.645	1.906
Hispanic	-7.075	.001	.462	1.587
Asian	1.267	3.549	1.416	4.121
Alaska Native/Native American	.954	2.595	.978	2.659
Other	-4.224	.015	-3.608	.027
Multi-ethnic	.393	1.481	-.340	.712
Age in Years	-.297	.743	-.431	.650 **
Sex	-.310	.734	1.060	2.886
Educational level	-.067	.935	-.081	.923
Prior misdemeanors	.049	1.051	-.018	.982
Prior felonies	-.341	.711	-.122	.885
Prior abuse	.952	2.591 ***	-.491	.612
Work time	-1.524	.218 ***	-1.254	.285
School time	-1.015	.362 ***	.334	1.396
Changes in living situation				
None		Contrast		Contrast
1-2 changes	1.377	3.964 ***	-.454	.635
3+ changes	2.352	10.503 *	1.371	3.938 ***
Constant	2.527	12.518	5.334	207.361
N	138		138	
Model -2 log likelihood	113.191		120.125	
Model chi-square	47.269		26.905	
Significance	.000		.059	

*p<.01, **p<.05, ***p<.10

³ The logistic regression analysis sample is smaller than the 155 juveniles discussed above. When information on a particular juvenile is missing, that juvenile is excluded from the analysis. In the analysis presented in Table 8, for example, 17 juveniles were excluded because data were not complete.

(new probation violations). The dependent variable is dichotomous (new violations, no new violations); it does not include any new criminal charges. The results indicate that two variables are significant predictors of new probation violations—participation in the CANS program (CON_EXP) and 3 or more changes in the juvenile's living situation. In addition, four other variables approach significance. These variables include work time, school time, prior history of abuse/neglect, and 1-2 changes in living situation.

To further explain this finding, the odds ratios need to be addressed. The results indicate that the odds of a juvenile in the CANS program having new probation violations, all else being equal, is 3.2 times greater than the odds of a juvenile not in the CANS program having new probation violations. Put another way, CANS program juveniles are 220 percent more likely to have new probation violations than control group participants. This finding is consistent with the intensive supervision probation literature which suggests that increased supervision leads to increased likelihood of technical violations. The findings here also suggest that juveniles with 3 or more changes in their living situation, regardless of whether they were CANS participants or not, are over 10 times more likely to have new probation violations than juveniles with no changes.

The variable 1-2 changes in living situation, which approaches statistical significance, may play some role in predicting new probation violations. This is not surprising given the finding that 3 or more changes also predicts probation outcomes. Two other variables, work time and school time, also approach statistical significance. Therefore, there is some evidence to suggest that juveniles who are not working/not working regularly and juveniles not attending school/not attending regularly are more likely to have new probation violations. Again, this finding is consistent with some of the ISP literature. The Colorado program discussed earlier suggested that full-time employment is related to successful completion of probation (BJA, 1997). Finally, a child with a prior history of abuse is somewhat more likely to have new probation violations though, the results are not statistically significant. It is worth restating that the higher significance levels for each of these four variables mean that the differences in outcomes may be due to chance alone rather than any true differences in living situation, work and school situation, and child abuse history.

Model 2 presents the findings using new charges as the dependent variable (ANY_OFF). The only significant relationship found to exist is between age and new charges. The relationship is negative, indicating that older juveniles were less likely to have new charges filed against them than younger juveniles. Put another way, for each unit increase in age (e.g., 1-year increase in age), the odds of new charges being filed are reduced by 35 percent. Again, 3 or more changes has some relation to new charges, albeit an insignificant relationship. The relationship is positive, indicating that instability in living situations increases the likelihood of having new charges filed.

With this analysis, participation in the CANS program did not significantly impact the likelihood of new charges being filed, and the variables included in the model, taken as a whole, did not do well in predicting outcome. Because of this, an alternative logistic regression model was constructed (Forward Stepwise) in order to develop a significant model. This model includes only the variables juvenile age and 3 or more changes in living situation. The other variables provided no significant contribution to predicting outcomes. Juvenile age, as already discussed, is a significant

Table 9. Logistic Regression Coefficients for Predictors of Program Outcomes (CANS Participants Only)

Variable	Model 1 (ANY PROB)		Model 2 (ANY OFF)	
	Beta	Odds ratio	Beta	Odds ratio
Race				
White		Contrast		Contrast
Black	-1.180	.307		
Hispanic	-8.919	.000		
Asian	11.050	62914.045	10.593	39870.013
Alaska Native/Native American	-.372	.690		
Other		Not included		Not included
Multi-ethnic	.124	1.132		
Age in years	-.264	.768		
Sex	.034	1.035		
Educational level	-.213	.808	-.376	.687 ***
Prior misdemeanors	.130	1.139		
Prior felonies	-.216	.805		
Prior abuse	1.207	3.345 ***		
Work time	-1.639	.194	-2.054	.128 ***
School time	-1.250	.287		
Changes in living situation				
None		Contrast		Contrast
1-2 changes	2.131	8.426 ***		
3+ changes	2.632	13.908 **	1.634	5.124 **
Dyad -- race	-.039	.962		
Dyad -- age	-.015	.985		
Dyad -- sex	-.722	.486		
Total visits	.013	1.013	-.464	.629 **
Constant	4.657	105.278	2.510	12.303
N		81		81
Model -2 log likelihood		69.182		63.001
Model chi-square		32.491		20.233
Significance		.027		.001

*p<.01, **p<.05, ***p<.10

predictor in the new model. More specifically, for each one year increase in age, the odds of new charges being filed decrease by 37 percent ($p<.001$). In addition, having three or more changes in the living situation increases the likelihood of new charges being filed by over 195 percent, compared with a juvenile with no changes ($p<.05$). In sum, these two variables are the most important predictors of a new charge and, regardless of the variables included, CANS participation does not significantly influence the likelihood of new charges being filed.

The third and final regression analysis examined only CANS participants. This permitted an analysis of outcomes using the

variables used above as well as variables that are unique to CANS participants. These variables include dyad-age, dyad-race, and dyad-sex, with each measuring the similarities between CANS officers and the juveniles assigned to them. The age variable is continuous and represents the difference in age between the officer and juvenile. The race and sex variables are dichotomous and simply indicate whether the pair were the same sex and race. A fourth variable, total number of visits, is included to allow for a test of the hypothesis that increased supervision (e.g., increased contact) leads to increased odds of probation violations and/or new charges. The results of the analysis are presented in Table 9.

Model 1 again shows the influence of particular variables on the likelihood of new probation violations; again, multiple changes in living situations is a significant predictor of whether a CANS

juvenile will have new probation violations. Having three or more changes increases the likelihood of new probation violations by almost 1,300 percent over the likelihood for CANS juveniles with no history of living situation changes. Two other variables—prior history of abuse and 2 or more changes in living situations—approach significant levels and may exert some influence on the outcome probation violations. Most surprising, however, is the finding that the number of visits did not influence the likelihood of new probation violations. The expectation would be that increasing the number of visits corresponds to increasing surveillance which leads to increased likelihood of technical violations. The findings do not support this expectation.

Table 10. Percent of Juveniles with New Charges by Number of Visits

Number of visits	N	Percent with new charges
0 visits	20	35.0 %
1 visit	28	14.3
2 visits	10	20.0
3 visits	13	30.8
4 visits	8	0.0
5 visits	6	16.7
6 visits	5	0.0
7 visits	1	0.0
Percentages may not total 100 percent due to rounding.		

Model 2 replicates the above analysis using new charges as the outcome instead of new probation violations. When all variables are included, the model does not perform well in predicting the data. Therefore, an alternative model (Backward Stepwise) was constructed that includes only those variables that are relevant in predicting the outcome. Four variables are included in the equation: educational level, work time, 3 or more changes in living situation, and total number of visits. Of these, only total visits and 3 or more changes in living situation are statistically significant. As in other analyses, the living situation variable increases the odds of new offenses. Among CANS participants only the increase in odds is over 400 percent. That is, a CANS juvenile with 3 or more changes in their living situation are more than 5 times as likely to have new charges during the pilot phase than juveniles with no changes.

More importantly, perhaps, for the CANS program is the impact of visitation. The results indicate that, among CANS participants, for every one visit increase, the odds of new charges being filed decrease by 37 percent. In other words, an increase in the intensity of contacts reduces the likelihood of a CANS juvenile having charges filed against them. If one considers the earlier finding that 63.8 percent of juveniles received fewer than 3 contacts during the study period, it is not surprising that CANS participation exerted no significant impact on new violations in the earlier analysis. However, if the results of the analysis of CANS individuals only are any indication, the impact of the CANS program may be more pronounced if the number of contacts are increased. Table 10 further illustrates this point. Thirty-five percent of CANS juveniles who received zero contacts had new charges filed against them. In contrast, only 5 percent of juveniles who were contacted 4 or more times had new charges filed against them. In sum, there is some evidence to suggest that increasing the number of visits may have a preventive impact on new offenses.

SUMMARY & DISCUSSION

The findings presented above closely correspond with the results of many studies on intensive supervision probation (ISP). The CANS program, like many ISP programs, often leads to an increase

in technical violations among those participating, when compared to similar groups with less supervision and surveillance. In addition, the evaluation of CANS suggests that public safety benefits may be visible only if contact levels reach a certain threshold. This section briefly summarizes the findings of the present evaluation and offers caveats and suggestions for the future.

The evaluation of CANS involved directly comparing a group of 91 CANS participants with 64 juvenile probationers not in the CANS program. The first outcome examined was new probation violations. The data reveal that almost 30 percent of CANS juveniles had new technical violations compared to slightly more than 17 percent of control group members. Furthermore, a more sophisticated logistic regression analysis identified CANS participation as a significant predictor of new probation violations. That is, CANS participants were over three times as likely to have new technical violations when compared to the control group. As noted earlier, these findings are not unexpected. ISP literature consistently found that, as a result of increased monitoring, participants were more likely to *be found* in violation. This fact does not imply that CANS or ISP participants commit more technical violations but, rather, there are increased opportunities of being caught.

Further analysis revealed no significant differences between control and CANS group members in the likelihood of committing offenses that resulted in new charges being filed. At first glance, this finding fails to support CANS objectives. The difference between the two groups was small—19.8 percent of CANS participants committed offenses that resulted in new charges, compared with 23.4 percent of control group members. However, this finding should not be interpreted alone; instead, it is also necessary to consider the intensity of contacts received by each juvenile. Only 22 percent of juveniles in the CANS program were contacted more than three times during the study period. Of the remaining juveniles, more than 28 percent did not receive a single visit. It is true that each CANS juvenile received a letter indicating that they were to expect visits from an assigned police officer. However, this letter is the only real distinction between the 22 percent of CANS juveniles who received no visits and the control group. With this in mind, an analysis was undertaken to examine the impact of contact intensity on CANS participants only. The findings are revealing. Controlling for all other variables, each contact reduced the odds of new charges being filed against a juvenile by 37 percent. It is entirely possible that the large number of CANS juveniles with few contacts masked any differences that did exist between CANS juveniles and the control group. If this possibility is correct, one could expect the preventive impact of CANS to be greater as the number of contacts increases. This is an empirical question which cannot be answered here. However, it is a hypothesis that can be analyzed with a future sample of cases.

Two additional findings are worth noting. Instability in a juvenile's living situation has consistently been found to be related to the likelihood of having new probation violations or new charges. More specifically, three or more changes increases the likelihood of having new probation violations 10 times, more than a juvenile with no changes. Similarly, juveniles with three or more changes are nearly four times as likely to have new charges filed against them. The influence of residential instability is independent of CANS participation. In other words, all else being equal, a juvenile with three or more changes in living situation is more likely to have probation violations or new charges. A second interesting finding is that increasing age reduces the probability of having

new charges. Again, the impact of age exists regardless of CANS participation. Yet, the influence of the CANS program discussed above influences outcome regardless of age and living situation changes.

Despite these findings, it is important to note that other factors may play a role in predicting outcomes. The results above consider only those variables that were included in the analysis, and these variables do not completely explain the variation in program outcomes. Although not measured or included in the analysis, additional factors related to officer contacts with juveniles may be pertinent. For example, the variable “number of contacts” included in the above analyses assumes that all visits are equal. The variable is not able to discern what the officer does on each visit, who is contacted (e.g., juvenile, guardian), how long the contact lasts, or where the contact was made. It is possible that certain types of visits are more beneficial and better able to predict program outcomes than other types. Limitation in data availability and measurement precluded an analysis of these factors. However, it is important to note that variability does exist in the nature and duration of the contacts; this variability may be able to enhance the influence of CANS on outcomes with juveniles.

Despite the caveat noted above, empirical support does exist that suggests that the objectives of the CANS program are being achieved. Although juveniles in CANS are more likely to have technical violations, the increased supervision also enhances the level of accountability for a juvenile’s actions. In addition, there is some evidence suggesting that increasing the number of contacts may reduce the levels of new charges. In combination, these findings support the conclusion by one ISP author. To borrow from Wagner (1989, cited in Fulton et al. 1997), increased supervision may have “suppressed criminal behavior by pre-empting it with technical violations.”

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